



**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.

Rulemaking 06-04-009  
(Filed April 13, 2006)

**BEFORE THE  
ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION  
OF THE STATE OF CALIFORNIA**

In the Matter of:

# Order Instituting Informational Proceeding on a Greenhouse Gas Emissions Cap

Docket 07-OIIP-01

## COMMENTS OF THE NORTHERN CALIFORNIA POWER AGENCY ON MODELING-RELATED ISSUES

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Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.

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# Order Instituting Informational Proceeding on a Greenhouse Gas Emissions Cap

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## **I. INTRODUCTION**

NCPA is supportive of the work being undertaken by the CPUC and Energy and Environmental Economics, Inc. (E3) in furtherance of developing a greater understanding of the cost implications associated with the mandated greenhouse gas (GHG) reductions required under Assembly Bill (AB) 32. The November 9 Modeling Ruling set forth a series of questions regarding Attachment A, a staff paper entitled *Greenhouse Gas Emissions Reduction Measures for the Electricity and Natural Gas Sectors Under Consideration as Part of R.06-04-009* (CPUC Staff Paper) and Attachment B, *CPUC Modeling Stage 1 Documentation*. NCPA offers these limited comments to facilitate the further development of: (1) GHG reduction measures and, (2) a model that can be utilized to accurately represent the entire electricity sector. To that end, it is important to note that both the CPUC Staff Paper and the E3 Modeling focus almost exclusively on the investor owned utilities (IOU) under the jurisdiction of the CPUC, and do not provide accurate or adequate information on other aspects of the electricity sector, including publicly owned utilities (POU). There are more than 40 POUs in the state, and collectively, these entities serve more than a quarter of the electricity customers state-wide. While the POUs are subject to regulation by different governing bodies and not the CPUC, to the extent that the proposals and recommendations being developed by the CPUC during the course of this proceeding will be used by the agency to provide a recommendation to the California Air Resources Board (CARB) for the *entire* electricity sector,<sup>4</sup> it is imperative that the information used in the modeling, as well as the information set forth in the CPUC Staff Report, represent the same scope.

## **II. COMMENTS ON ATTACHMENT A**

### **A. General Comments on Attachment A**

NCPA urges the Commission to direct staff to revise Attachment A to include a full

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<sup>3</sup> These comments are being concurrently filed with the CPUC in Rulemaking 06-04-009 and with the California Energy Commission (CEC) in Docket 07-OIIP-01.

<sup>4</sup>See December 21, 2007, Assigned Commissioner Ruling Modifying the Phase 2 Scoping Memo and Updating the Phase 2 Schedule.

and fair representation of all measures being considered for the electricity sector, including the POUs. Attachment A represents an incomplete review of potential GHG reduction measures in that the CPUC Staff Report does not address existing control measures applicable to the POUs, nor does it reflect the important steps POUs have taken to reduce their carbon footprint. This oversight is especially problematic in light of the fact that the purpose of this proceeding is to develop recommendations for all aspects of the electricity sector, and not just the IOUs. Among other things, California's POUs are required to comply with energy efficiency requirements, renewable portfolio standards, an emissions performance standard, the California Solar Initiative, and the state mandated "loading order." Each of these should be addressed in Attachment A to the same extent they are discussed with respect to the IOUs.

The CPUC Staff Report also errs in concluding that renewable and energy efficiency goals set by POUs through their local regulatory authorities "may be inherently less reliable."<sup>5</sup> This conclusion is patently false, and exhibits a fundamental misunderstanding regarding the regulatory oversight of POUs. As more fully set forth in the Comments of the California Municipal Utilities Association (CMUA Comments), local governing bodies responsible for the oversight of POUs are bound by regulatory requirements analogous to those that the CPUC has over the IOUs.

## **B. Responses to Specific Questions on Attachment A**

*Q1. Does Attachment A cover all of the viable emissions reduction measures available in the electricity and natural gas sectors? If not, what other measures should be considered for the purposes of forecasting emissions reduction potential within these sectors? Please include suggested data sources and references for information regarding any additional measure you propose.*

**Response to Q1:** While Attachment A appears to accurately reflect the viable emissions reduction measures applicable to the IOUs, the CPUC Staff Report fails to acknowledge the reduction measures undertaken by the POUs. The CPUC should direct that the CPUC Staff Report be revised to include references, at a minimum, to the following:

**POU Energy Efficiency Programs and Targets:** As set forth in Public Utilities Code § 9615(a), "each local publicly owned electric utility, in procuring energy to serve the load of its retail end-use customers, shall first acquire all available energy efficiency and demand reduction resources that are cost effective, reliable, and

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<sup>5</sup> Attachment A at p. 13.

*feasible.”*

POU Renewable Portfolio Standards: Public Utilities Code § 387(a) requires that “*each governing body of a local publicly owned electric utility . . . **shall be responsible for implementing and enforcing a renewables portfolio standard that recognizes the intent of the Legislature to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement.***” (emphasis added)

POU Obligations under the California Solar Initiative (CSI): As mandated by Public Utilities Code § 387.5(a), “*the governing body of a local publicly owned electric utility . . . that sells electricity at retail, **shall adopt, implement, and finance a solar initiative program, funded in accordance with subdivision (b), for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems.***” (Emphasis added)

POU Emissions Performance Standard (EPS): Pursuant to the provisions of Public Utilities Code § 8341, “*No load-serving entity or **local publicly owned electric utility** may enter into a long-term financial commitment unless any baseload generation supplied under the long-term financial commitment complies with the greenhouse gases emission performance standard established by . . . the Energy Commission, pursuant to subdivision (e), for a local publicly owned electric utility.*” (Emphasis added) The CEC adopted an EPS for POUs of 1,100 pounds of CO<sub>2</sub> emissions per megawatt hour; this is the same standard that the CPUC adopted for its jurisdictional utilities in D.07-01-039.

*Q2. Are there emission reduction measures identified within Attachment A that you believe, based on currently available information, should not be implemented as a means to achieving emission reductions within the context of AB 32? Please justify your answer.*

**Response to Q2:** NCPA does not provide a response to this question at this time.

*Q3. What means beyond policies currently adopted by the two Commissions hold potential for the delivery of additional energy efficiency?*

**Response to Q3:** As more fully set forth in the CMUA Comments, the governing boards of POUs have adopted policies that seek to provide further GHG reductions through energy efficiency. These programs – favorably referenced in the 2007 Integrated Energy Policy Report (IEPR),<sup>6</sup> are set forth and detailed in the report submitted by CMUA to the

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<sup>6</sup> “Like the investor-owned utilities, the publicly owned utilities administer a variety of energy efficiency programs for their customers. During fiscal year 2005–2006, all publicly owned utilities collectively spent more than \$54 million on energy efficiency and saved more than 170 gigawatt hours and 53 megawatts of peak electricity. . . . The two largest publicly owned utilities in the state, Sacramento Municipal Utility District

CEC, entitled *Establishing Energy Efficiency Targets: A Public Power Response to AB 2021, Final Update*, dated October 2007.

Q4. What means beyond policies currently adopted by the two Commissions hold potential for the integration of additional renewable resources into the grid?

**Response to Q4:** In addition to the policies adopted by the local governing authorities of the various POU's, the most crucial element to further integration of renewable resources into the grid is transmission. Recognizing the importance of transmission development to insure that remote renewable resources can be delivered to California's electricity users, several POU's have made significant investments in transmission resources. Current policies must be expanded and must insure that those that invest in these resources benefit from the investments. The state needs to look to transmission development as a key element to both increasing the availability of renewable resources in California, as well as meeting the objectives of AB32.

Q5. How might an emissions reduction strategy within the electricity sector be targeted to displace the most carbon intensive aspects of California's electricity resource mix?

**Response to Q2:** NCPA does not provide a response to this question at this time.

### **III. COMMENTS ON ATTACHMENT B**

#### **A. General Comments on Attachment B**

NCPA commends the work done by E3 in developing the model, and its responsiveness to inquiries regarding the model, assumptions, and inputs. NCPA offers these comments in the interest of obtaining greater clarity in the process.

Overall Implementation Impacts: One of the major challenges presented with the current model is its inability to address the cumulative impacts of AB32 implementation. The current version of the model considers impacts for 2008 and 2020 only. The fact that the current model does not allow for a review of the transition years between now and 2020 (as well as

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(SMUD) and Los Angeles Department of Water and Power (LADWP), both of which have had programs as long as the investor-owned utilities, account for 3.2 percent of the statewide savings, but 60 percent of the publicly owned utility savings." IEPR at pp. 96-97.

impacts beyond 2020) decreases the extent to which policymakers and stakeholders can fully understand the cumulative impact of AB32 on California consumers, and best optimize progress toward meeting statewide GHG reduction goals while achieving AB32's mandate that those goals be accomplished in the most cost-effective manner.<sup>7</sup> Without looking at reduction strategies on an annual basis, the following policy insights are lost:

- The impact of utility behavior from 2012, the first year that CARB rules are enforceable, to 2020;
- An ability to evaluate the progress of utilities that must modify their resource portfolio from a high carbon to a low carbon profile;
- Early action taken by utilities to more rapidly change resource portfolios;
- The ability to implement allowance allocation mechanisms that might transition from one methodology to another methodology over time; and
- The best way in which to accommodate new market entrants, load growth, or additional emission reduction responsibilities from other sectors of the California economy.

Recommended Approach: On page 11, Attachment B sets forth certain data sources and approaches that were utilized to develop the assumptions used in the model. Among those, item 3 provides that *“generators that are directly owned by a California utility were assigned to that utility for both 2008 and 2020. In the case of the POU, other than SMUD and LADWP, generators owned by a POU were assigned to the grouping of “NorthernOther” or “SouthernOther,” based on the municipality’s location.”* There is no further information regarding how these other groupings were determined, or what potential impacts this level of aggregation could have on some of the smaller utilities located within either of the larger groups. While it is understandable that resource and timing constraints limited the number of model scenarios that could be developed, NCPA believes that additional disaggregation is necessary to develop a model that fully represents the entire electricity sector. To that end, NCPA has previously offered its support, and would be willing to work with E3 to provide greater utility-specific information.

Energy Efficiency Levels: On page 49, Attachment B notes that *“the CPUC has currently set EE targets for the IOUs through 2013, and the CEC has set targets for the POUs through 2016.”* Although many POUs have established energy efficiency targets in that range,

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<sup>7</sup> See for example, Health and Safety Code § 38562(a).

these targets are not set by the CEC, but rather are established by the governing bodies of each POU pursuant to the directives of Assembly Bill 2021 (see Public Utilities Code § 9615).

**B. Responses to Specific Questions set forth in the November 9 Ruling**

Q6. Does E3's modeling documentation adequately document the methodology, inputs, and other assumptions underlying its model? If not, what additional documentation should be added?

**Response to Q6.** E3 should be commended for preparing comprehensive and descriptive modeling documentation. While NCPA has noted that the model could be well served by greater disaggregation, including utility-specific information from the state's POUs, the documentation that has been provided to substantiate and support the modeling done in Stage 1 is adequate.

Q7. Provide feedback, as desired or appropriate, on the structure and approach taken by E3 in its GHG Calculator spreadsheet tool.

**Response to Q7:** NCPA does not provide a response to this question at this time.

Q8. Provide feedback, as desired or appropriate, on the data sources used by E3 for its assumptions in its issue papers. If you prefer different assumptions or sources, provide appropriate citations and explain the reason for your preference.

**Response to Q8:** NPCA offers the following observations and feedback regarding the data sources utilized in the modeling.

California Solar Initiative Assumptions: The CSI assumption of 3,000 MW does not appear to include the megawatts of solar energy that would be developed under POU CSI programs. Under Senate Bill 1, CSI total program costs are not to exceed \$3,350,800,000 dollars. Of that amount, \$784,000,000 is attributable to POUs.<sup>8</sup> Accordingly, adjustments should be made to reflect the POU contribution to CSI. For simplicity purposes, the contribution could be adjusted based on latest retail sales estimates available to E3.

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<sup>8</sup> Public Utilities Code § 387.5(g): "The statewide expenditures for solar programs adopted, implemented, and financed by local publicly owned electric utilities shall be seven hundred eighty-four million dollars (\$784,000,000)."



Demand Response Assumptions: E3 assumes that demand response will meet the Energy Action Plan (EAP) goal of 5% of California's peak demand (including IOUs and POU's) by 2020, reaching 3,600 MW of peak load compared to a peak demand of 72,000 MW.<sup>9</sup> The model should be revised to allow for changes to the demand response input assumptions.

As a practical matter, this assumption fails to take into consideration the demand response activities being undertaken by any of the POU's. The POU's' demand response program activities were highlighted in a December 2006 report submitted by CMUA to the CEC.<sup>10</sup> An updated report will be released in March 2008, and NCPA would be willing to facilitate E3 in obtaining additional data that may be needed.

Furthermore, in a recent CEC Consultant report addressing the state of demand response in California, current statewide demand response estimates for IOUs are well below the 5% threshold.<sup>11</sup> Despite aggressive smart-meter installation schedules for PG&E and SDG&E, many regulatory and technological barriers remain which must be resolved to increase the level of demand response in the state.

Emission Rates Assumed for Unspecified Imports: The E3 model assumes that the Emissions Performance Standard of 1,100 lbs CO<sub>2</sub> per MWh recommended in D.07-09-017 be utilized for all unspecified resources. While the Joint Agencies did recommend that the 1,100 pound EPS be used, pursuant to the Mandatory Reporting and Verification Regulations adopted by CARB on December 6, 2007, it is not clear that CARB will ultimately accept this recommendation when entities are required to document their annual emissions. Indeed, the Joint Agencies recommended that the data inputs be updated "*on an annual basis, at least initially, so that CARB, the reporting entities, and other market participants can better*

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<sup>9</sup> Attachment B at p. 7.

<sup>10</sup> California Municipal Utilities Association, *Energy Efficiency in California's Public Power Sector: A Status Report*, December 2006.

<sup>11</sup> The Brattle Group, *The State of Demand Response in California*, CEC Publication CEC-200-2007-003F, September 2007.

*understand the implications of the adopted GHG regulations,*”<sup>12</sup> further necessitating a revision to the model that allows for variable inputs on unspecified resources.

Mapping of California LSE Regions: E3 disaggregates the California electricity sector into seven distinct areas<sup>13</sup>, including PG&E, SCE, SDG&E, SMUD, LADWP, Northern-Other, and Southern-Other. NCPA understands the need for E3 to provide some level of model simplification from a data management perspective. Without further disaggregation, or some clear connection to further disaggregation, however, results produced by the E3 model may oversell the stated value of any potential carbon reduction policy that may be recommended by the CPUC and the CEC to CARB. For example, such policies may produce unintended consequences for smaller utilities included in the Southern-Other and Northern-Other categories that have relatively low carbon footprints.

NCPA has undertaken extensive modeling efforts with the assistance of R.W. Beck to further disaggregate each NCPA member from the Northern-Other category. This modeling has allowed NCPA to analyze individual utility impacts stemming from the E3 model results. NCPA urges strong consideration of such analyses before specific policies are adopted by the state agencies, and welcomes the opportunity to discuss these issues in much greater detail in a manner considered most appropriate for a public process.

*Q9. Are uncertainties inherent in the resource potential and cost estimates adequately identified? Does E3’s model provide enough flexibility to test alternative assumptions with respect to these uncertainties?*

**Response to Q9:** NCPA does not provide a response to this question at this time.

*Q10. Has the E3 model adequately accounted for the implications of increased reliance on preferred resources (renewables, efficiency) on system costs?*

**Response to Q10:** NCPA does not provide a response to this question at this time.

*Q11. Should E3’s model, in Stage 2, attempt to model potential market transformation scenarios, in the form of cost decreases, new technologies, or behavioral changes?*

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<sup>12</sup> D.07-09-017 at p. 44.

<sup>13</sup> Attachment B, Section 11, Table 3.

What might be an appropriate way to characterize such potential for market transformation?

**Response to Q11:** NCPA does not provide a response to this question at this time.

Q12. What specific flexible GHG emission reduction mechanisms to mitigate the economic impacts of achieving the desired GHG emission reductions should be modeled in Stage 2?

**Response to Q12:** Stage 2 will provide the key in the E3 analysis to addressing utility-specific issues such as potential allowance allocation mechanisms and possible cross-sector trading. In doing so, the Stage 2 version of the model should incorporate maximum flexibility in terms of the various input assumptions allowed by the user, including those discussed above. NCPA recommends that the E3 model be revised to include flexible input assumptions for the following:

- Renewable portfolio standards, demand response, and energy efficiency targets by utility region and date;
- Enhanced utility coal reduction strategies beyond those driven by statutory directive;<sup>14</sup>
- Allowance Allocation Switches, based on:
  - Sales (utilizing a specific year or moving date)
  - Emissions (utilizing a specific year or moving date)
  - Transition from Sales to Emissions (with assumed beginning and ending transition dates); and
- Emissions assumptions for unspecified imports from the Pacific Northwest and the Southwest

Furthermore, the Joint Agencies – and E3 – should give careful consideration to ongoing deliberations in the CARB Scoping Plan process, as measures addressed in that process will impact decisions made for the electricity sector. Two key workshops are scheduled by CARB for January 16 and April 4 to discuss emission reduction mechanisms and scenarios, respectively. Those elements given specific attention at those meetings should be modeled to the extent practical by E3 and utilized in Stage 2.

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<sup>14</sup> This would assume the retirement or sale of interests in coal-fired generation beyond the termination of existing contracts that would not be renewed for failing to meeting the EPS adopted pursuant to SB1368.

Q13. What output metric or metrics should be utilized to evaluate the least cost way to meet a 2020 emission reduction target for the sector?

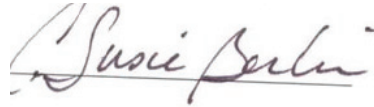
**Response to Q13:** NCPA does not provide a response to this question at this time.

#### **IV. CONCLUSION**

NCPA commends the efforts of the CPUC and CEC, along with E3 to develop proposed reduction mechanisms and a model that reflects the cost implications and impacts associated with AB32 compliance in the electricity sector. Furthermore, NCPA appreciates the opportunity to provide these comments on the CPUC Staff Paper and on the CPUC GHG Modeling Stage 1 Documentation, and looks forward to further collaborative efforts between the Joint Agencies and the energy sector participants in moving forward with the more detailed Stage 2 modeling.

January 7, 2008

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Susie Berlin", written over a horizontal line.

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## CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rule of Practice and Procedure, I have this day served a true copy of the **COMMENTS OF THE NORTHERN CALIFORNIA POWER AGENCY ON MODELING-RELATED ISSUES** on all parties on the Service Lists for R.06-04-009, as last revised on the Commission's website on January 2, 2008, by electronic mail, and by U.S. mail with first class postage prepaid on those Appearances that did not provide an electronic mail address.

Executed at San Jose, California this 7<sup>th</sup> day of January, 2008.

A handwritten signature in blue ink, appearing to read 'Katie McCarthy', with a horizontal line drawn through the middle of the signature.

Katie McCarthy